

IN THE CLAIMS:

Please cancel claims 8 and 9 without prejudice or disclaimer of the subject matter thereof.

Listing of the Claims:

1. (original) A plasma processing method which comprises supplying a processing gas to a vacuum vessel forming a plasma production part, producing a plasma using an antenna and a Faraday shield which are provided at outer periphery of the vacuum vessel and to which a high-frequency electric power can be applied, and carrying out the processing, wherein a voltage of at least 500 V is applied to the Faraday shield and a sample which is disposed in the vacuum vessel and which is a nonvolatile material as a material to be etched is etched.

2. (original) A plasma processing method which comprises supplying a processing gas to a vacuum vessel forming a plasma production part, producing a plasma using an antenna and a Faraday shield which are provided at outer periphery of the vacuum vessel and to which a high-frequency electric power can be applied, and carrying out the processing, wherein a voltage of at least 500 V is applied to the Faraday shield and reaction products deposited on the inner wall of the vacuum vessel are cleaned.

3. (original) A plasma processing method according to claim 2, wherein the processing gas is a mixed gas comprising boron trichloride and chlorine.

4. (original) A plasma processing method according to claim 3, wherein the processing gas is supplied so that the mixed gas comprises 20% of boron trichloride and 80% of chlorine, thereby cleaning the inner wall of the vacuum vessel.

5. (original) A plasma processing method according to claim 2, wherein a voltage of at least 1500 V is applied to the Faraday shield.

6. (original) A plasma processing method which comprises supplying a processing gas to a vacuum vessel forming a plasma production part, producing a plasma using an antenna and a Faraday shield which are provided at outer periphery of the vacuum vessel and to which a high-frequency electric power can be applied, and carrying out the processing, wherein the method comprises the first step of carrying a dummy wafer onto a sample stand, applying a voltage of at least 500 V to the Faraday shield and removing foreign matters in the vacuum vessel with a plasma using a gas containing chlorine, the second step of etching a sample which is disposed on the sample stand in the vacuum vessel and which is a nonvolatile material as a material to be etched after the first step, and the third step of applying a voltage of at least 1500 V to the Faraday shield after the second step, and removing reaction products in the vacuum vessel using a mixed gas comprising boron trichloride and chlorine.

7. (original) A plasma processing method which comprises supplying a processing gas to a vacuum vessel forming a plasma production part, producing a plasma using an antenna and a Faraday shield which are provided at outer periphery of the vacuum vessel and to which a high-frequency electric power can be applied, and carrying out the processing, wherein the number of foreign matters in the vacuum vessel is detected by a monitor for foreign matters, cleaning by applying a voltage to the Faraday shield is carried out in case the number of foreign matters

exceeds a given upper limit and the cleaning is terminated in case the number of foreign matters decreases below a given lower limit.

Claims 8 and 9 (canceled)